



# SUNRISE RESOURCES PLC

## AIM ANNOUNCEMENT

18 February 2013

SUNRISE RESOURCES PLC  
[www.sunriseresourcesplc.com](http://www.sunriseresourcesplc.com)  
("the Company")

### UPDATE – CUE DIAMOND PROJECT

Sunrise Resources plc wishes to advise that its independent consultant, Mineral Services Laboratories ("Mineral Services"), has now reported the results of its review of diamond sampling and mineralogical data from surface and drill samples of the Cue 1 kimberlite, the first kimberlite to be tested on the Company's Cue diamond project in Western Australia.

The Company is also providing an update on further field evaluation of recently announced kimberlite float discoveries and is reporting a third new discovery of kimberlite float.

#### Results of microdiamond and indicator mineral analysis

Mineral Services has carried out size distribution and grade modelling on microdiamond data for six samples of percussion (RC) drill chip material obtained from the Cue 1 kimberlite and a single sample collected from its surface outcrop.

In addition Mineral Services has processed a 10kg sample of the Cue 1 kimberlite for recovery of kimberlite indicator minerals ("KIMs") and has evaluated the results using its proprietary <sup>1</sup>Mantle Mapper™ procedures as a further evaluation of the Cue 1 kimberlite and, importantly, to determine the general diamond prospectivity of the Cue project area.

#### **Cue 1 Kimberlite Grade Modelling**

Macrodiamond (here defined as commercial sized, +0.85mm diamonds) grade modelling was carried out on combined drill sample results, individual drill samples and various sample groupings to evaluate variability in the sample results. The results of modelling indicated that, whilst small diamonds are present in significant quantities, the diamond population is fine grained and macrodiamonds are likely to be scarce. The modelled macrodiamond grade for all sample groups was less than 2 carats per hundred tonnes.

#### **General Project Prospectivity - Mineralogical Evaluation**

It is well established that the diamond content of individual kimberlite bodies within a kimberlite field can be highly variable with non-diamoniferous, low grade and high grade kimberlites often present in the same field. Furthermore, the diamond content of an individual kimberlite body can be variable between different phases of that same kimberlite.

The samples so far evaluated come from a very limited part of the Cue 1 kimberlite dyke so it is important at this early stage of exploration to establish not just the prospectivity of different parts of the same body but also the general diamond prospectivity of other kimberlites in the same field. Mineral Services proprietary <sup>1</sup>Mantle Mapper™ procedure is a powerful tool in this evaluation.

Ten kilograms of sample CURC10.2 was processed for extraction of KIMs and their composition determined by microprobe analysis. This mineral composition data was combined with similar data obtained for KIMs extracted from the 36kg Cue 1 kimberlite surface sample.

The KIMs recovered from the samples have characteristics consistent with derivation from a kimberlite. The concentration of KIMs in the samples is very low. While weathering processes may have played a role in reducing KIM abundance (in particular that of the silicate minerals garnet and clinopyroxene), the data are interpreted by Mineral Services to indicate low original concentrations of these minerals, consistent with the low macrodiamond grade inferred on the basis of microdiamond results.

Significant and positive technical findings of the Mantle Mapper™ analysis reported by Mineral Services are as follows:

- Calculated pressures and temperatures for chrome diopside imply some deep sampling by the ascending kimberlite magma of garnet peridotite from significant depths on a cool cratonic geotherm (a fertile source for diamonds).
- Compositions of the limited number of peridotitic garnets recovered, particularly the presence of two G10 (diamond associated harzburgitic composition) grains, confirm that some high pressure diamond bearing peridotite has been incorporated and that peridotitic diamonds will likely be present, albeit in probable very low quantities within the material sampled.
- Ilmenite compositions reflect neutral redox conditions at the time of kimberlite emplacement and so diamond resorption (which can reduce the size of the diamonds) is not likely to have impacted the diamond population.

Mineral Services concludes that whilst the results obtained for samples evaluated to date indicate a very low diamond potential for that part of the body that they represent, the indicator mineral data suggests the area in which it occurs is broadly prospective for diamonds.

### **Prospecting – February 2013**

In early February 2013 a further prospecting visit was made to the Cue project. During the visit a new occurrence of kimberlite float was discovered at the Fennel's Well target adding a third new and geographically separate target to the kimberlite float discoveries recently announced at Targets 5 and 8.

A 40 kg sample of the Target 5 kimberlite float was collected and has now been submitted for microdiamond evaluation. Insufficient float was present at Fennels Well or at Target 8 to obtain a meaningful sized sample (this should not be taken to mean the source is not of further interest as not all kimberlites will shed a significant amount of float).

**Commenting today, Executive Chairman Patrick Cheetham said:** "The results being presented today are necessarily technical and whilst it is disappointing that the first kimberlite we have tested has a probable low diamond grade, the results for this body do not downgrade the overall prospectivity of the property. Informed commentators will appreciate the significance of the Mantle Mapper™ information which suggests that there is potential for other kimberlites occurring in the same area to contain significant quantities of diamond. It is still early days in our exploration programme and new kimberlite occurrences continue to be found."



The Chairman will be making a presentation of the Company's projects at the Annual General Meeting of the Company on 19th February and a copy of the presentation will be made available on the Company's website in due course.

**Further information:**

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**Foot Notes:**

1. Extract from Mineral Services website; <http://www.msgroup.net/page/ms-mantle-mapper/>

Mantle Mapper™ is a procedure developed by Mineral Services to quantitatively analyse the abundance and composition of key mantle-derived minerals (indicator minerals) in kimberlite. This allows quick, cost-effective and reliable evaluation of the diamond potential of the host body as well as an assessment of the nature and general prospectivity of the mantle sampled. Rigorous and consistent sample processing, indicator mineral recovery and analytical procedures are employed to ensure the data obtained are representative, quantitative and reproducible.

Mantle Mapper™ results provide a means of assessing the prospectivity of the region in which the kimberlite occurs. A low diamond content/ potential in a particular kimberlite does not necessarily rule out the presence of diamondiferous bodies in the area in which it occurs. In many cases, however, the low diamond content of a kimberlite reflects regional factors that significantly limit the potential for other diamondiferous bodies nearby. These factors are typically evident in the Mantle Mapper™ results.

2. The information in this release has been compiled and reviewed by Mr. Patrick Cheetham (MIMMM, MAusIMM) who is a qualified person for the purposes of the AIM Note for Mining and Oil & Gas Companies dated June 2009. Mr Cheetham is a Member of the Institute of Materials, Minerals & Mining and also a member of the Australasian Institute of Mining & Metallurgy.

**About Sunrise Resources plc**

Sunrise Resources plc is a diversified mineral exploration and development specialist.

The Company is evaluating a production opportunity for white barite in South-West Ireland and diamond exploration interests in Western Australia and Finland.

Shares in the Company trade on AIM. EPIC: "SRES" [www.sunriseresourcesplc.com](http://www.sunriseresourcesplc.com)

